DOCUMENT RESUME

ED 262 327 CG 018 562

AUTHOR Zelhart, Paul F.; And Others
TITLE The Role of Anxiety in Self-Actualization. Symposium Presented at the Southwestern Psychological Association (31st, Austin, Texas, April 18-20, 1985).
PUB DATE Apr 85
NOTE 32p.
PUB TYPE Collected Works - Conference Proceedings (021) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Anxiety; *Creativity; Developmental Stages; *Personality Development; Problem Solving; *Self Actualization; *Test Bias; *Theories
IDENTIFIERS *Personal Orientation Inventory

ABSTRACT

This document contains three papers describing theoretical approaches and empirical findings concerning the role of anxiety in self-actualization. "Opposing Views of Anxiety and Self-Actualization" by Paul F. Zelhart describes theories of self-actualization that take opposite views of the role of anxiety in psychological development (Maslow, 1968 versus Dabrowski, 1972). "Assessing Anxiety and Self-Actualization" by Robert P. Markley describes studies showing the Personal Orientation Inventory (POI) to be biased in favor of the Maslowian view of self-actualization and calls into question prior research using the POI to test opposing views of anxiety and self-actualization. The final paper, "Self-Actualization of the Adaptor and Innovator" by J. Morris Beene, Jr., presents recent results using the Kirton Adaptation/Innovation Inventory and a modified version of the POI which show anxiety to be a positive correlate of adaption and innovation. (Author/NRB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

THE ROLE OF ANXIETY IN SELF-ACTUALIZATION

Joseph R. Helton, Chair
East Texas State University

Opposing Views of Anxiety and Self-Actualization
Paul F. Zelhart
East Texas State University

Assessing Anxeity and Self-Actualization
Robert P. Markley
Fort Hays State University

Self-Actualization of the Adaptor and Innovator
J. Morris Beene, Jr.
East Texas State University

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Paul F. Zelhart
Robert P. Markley
J. Morris Beene, Jr.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CG 018562

A Symposium Presented at the
31st Annual Convention of
The Southwestern Psychological Association
April 18-20, 1985

Abstract

Three papers describing theoretical approaches and empirical findings concerning the role of anxiety in self-actualization are presented. The first paper describes theories of self-actualization that takes opposite views of the role of anxiety in psychological development (Maslow, 1968 vs. Dabrowski, 1972). The second paper describes studies showing the Personal Orientation Inventory (POI) to be biased in favor of the Maslowian view of self-actualization and calls into question prior research using the POI to test opposing views of anxiety and self-actualization. The final paper presents recent results using the Kirton Adaption/Innovation Inventory and a modified version of the POI which show anxiety to be a positive correlate of adaption and innovation.

Paper #1

OPPOSING VIEWS OF ANXIETY AND SELF-ACTUALIZATION

Paul F. Zelhart

The observations presented in this document are part of a larger examination of the development and characteristics of creative problem solvers, and the matching of creative problem solvers to problem situations.

Although most personality theorists have something to say about creativity and the development of creative artists, two theorists, Kazimierz Dabrowski (1970) and Abraham Maslow (1968), hold the development of personality to be the quintessential creative act of all individuals.

Dabrowski

The lesser known theory, Positive Disintegration by Dabrowski, is in the tradition of European, organically based developmental theories. You will find in this theory the influences of Freud (through Steckel, who trained Dabrowski in psychoanalysis) and Piaget who was one of Dabrowski's professors. The influences of European existentialism, and Dabrowski's Catholocism are also clear. Dabrowski's concerns about value development also anticipated recent work by Kohlberg (1964).

Dabrowski proposes that human development is on five levels. Each level is distinguished by the values manifested by the individual, and distinctive behaviors which are representative of instincts (dynamisms) guiding development of that level. Development is, in fact, the development of a value hierarchy or

value hierarchies that mediate the decisions of the individual made in the creation of personality. Dabrowski's approach differs from that of the better known stage theorists in that in psychological development is not tied to chronological age and maturation. Dabrowski also provides that development can be on several levels simultaneously. "Positive Disintegration" is Dabrowski's term for the process by which the cognitive structures of a higher level replace the structures of a lower level. The theory also holds that at a particular point in the development of personality the individual becomes aware of his or her development and takes conscious control of the process. Personality development then becomes a series of creative decisions with regard to the individual's (the artist's) vision of the final product: the ideal self (Dabrowski, 1970).

Figure 1 represents Dabrowski's five levels of development and Maslow's need hierarchy. To return to Dabrowski's theory, movement between levels is marked by conflict between the value related structures of personality. Development proceeds from a conflict free state (Primary Integration), through levels of development marked by conflict, to a second conflict free level (Secondary Integration). Throughout the first four levels of development, and the transitions between levels, anxiety has a major role in the development process. Development is, according to Dabrowski, a painful process which is marked by behaviors which have classically been thought of as typical of a psychoneurotic. Dabrowski redefines most such "symptoms" as indices of psychological restructuring and growth. So,

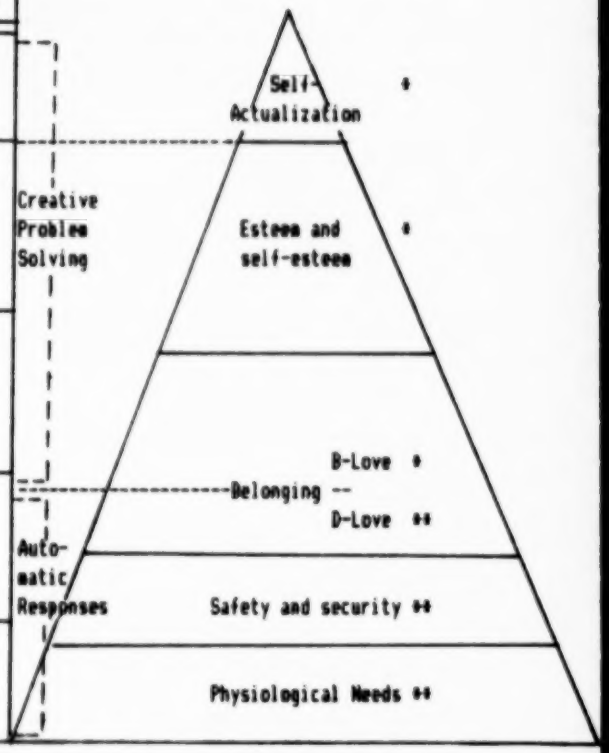
Figure 1

Comparison of Dabrowski and Maslow

DABROWSKI'S POSITIVE DISINTEGRATION:
LEVEL OF PSYCHOLOGICAL DEVELOPMENT

Development Level	Personality Conflict	Stimuli which evoke enhanced re-activity	Psychopathology during transition	Growth Through anxiety and discomfort
V. Secondary Integration	None	Emotional (primarily) Imaginal (secondary) Intellectual (*)	None	N/A
IV. Organized multi-level disintegration	Intra- and Inter-level	Emotional, Imaginal, Intellectual	Psychoneurosis	Yes
III. Spontaneous multi-level disintegration	Intra- and Inter-level	Emotional, Imaginal, Intellectual	Psychoneurosis	Yes
II. Uni-level disintegration	Intra-level	Sensual, Motoric	Psychosis Psychoneurosis	Yes
I. Primary Integration	None	Sensual, Motoric	Psychosis	N/A

MASLOW'S SELF-ACTUALIZATION:
HIERARCHY OF NEEDS



* Growth Needs
** Deficiency Needs

psychoneurosis is redefined, in most cases, as a manifestation of psychological growth rather than an illness (Dabrowski, 1972).

To summarize, Dabrowski sees higher levels of personality development as intentional creative acts of the individual. The process is marked by discomfort and psychoneurotic symptomology, in which negative affective states, especially anxiety, play a major developmental role.

Maslow

Maslow's (1968) work is, of course, better known. His theory too utilizes a primary construct which is organically based -- need. In the fashion of his time, he substituted need for instinct; but, in fact he called higher, distinctively human, needs "Instinctoid" to disinguish them from the needs of lower animals. Dabrowski chose a similar strategy when he called the instincts that guide human development "dynamisms." Clear influences of phenomenology and existentialism can be seen in Maslow's theory.

Maslow conceptualized personality dynamics as a priority relationship between the satisfaction of the stronger deficit needs and the weaker growth oriented needs. His hierarchy of needs and corresponding levels in Dabrowski's model can be seen in Figure 1. In his system deficit needs must be met before satisfaction of the positive growth oriented needs could be pursued. On the interplay of these motives, between defense and growth, Maslow said, "growth takes place when the next step forward is subjectively more intrinsically satisifying than the previous gratification with which we are familier and bored . . .

We can consider the process of healthy growth to be a never ending series of free choice situations, confronting each individual at every point throughout his life, in which her must choose between the delights of safety and growth . . . Safety has both anxieties and delights. We grow forward when the delights of growth and anxieties of safety are greater than the anxieties of growth and the delights of safety" (Maslow, 1968).

For Maslow, there is in all individuals a common hierarchy of needs. That is, the types and the relationship between needs and their relative strengths is determined and common. Individuals differ, of course, with regard to vigor, abilities, and experience. The key element in Maslow's theory is his use of positive growth needs (pleasurable tensions) that are not homeostatic. Their satisfaction brings health, and they are to a greater degree, independent of the environment. Failure to satisfy these needs, however, produces unique disorders of growth (metapathologies); but failure to satisfy deficit needs, by way of comparison, brings illness in the more common psychological sense.

Comparison

So, Maslow equates self-actualization with health and creativity. He says that self-actualization is a creative process which results from the joyful satisfaction of growth needs. For Maslow, growth comes through the ECSTACY of creative self-actualization. For Dabrowski, growth occurs through the AGONY of anxiety, self-doubt, depression, and despair. To our

minds the Agony/Ecstacy issue is perhaps the major difference between the two theories. It is one which has been empirically tested to some degree.

We should note that both Dabrowski and Maslow are clinical scientists. They depended upon personal observations and case studies. Dabrowski once said that his clinical insights were "much richer," and, probably thought more valid than any empirical study (Zelhart, 1975). Certainly, both authors can be criticized for the lack of empirical evidence upon which their theories rest. In the section that follows, the Agony/Ecstacy issue will be taken up through a series of empirical investigations that examine the role of anxiety in self-actualization. In the final section the relationship between self-actualization and styles of creative problem solving will be investigated using measures of self-actualization that control for anxiety related biases in standard measures of self-actualization.

Paper #2

ASSESSING ANXIETY AND SELF-ACTUALIZATION

Robert P. Markley

The empirical issue of concern is the relationship between several measures of anxiety and a measure of self-actualization. The theoretical issue concerns the role that, what is loosely labeled as anxiety -- or certain forms of anxiety -- has in

BEST COPY

personality development and growth. Two basic dynamics have been identified: (1) First of all, excessive anxiety (arousal, drive, fear, etc.) can clearly interfere with and hinder normal and healthy performance of all but the most overlearned activities (Yerkes & Dodson, 1908). (2) On the other hand, as emphasized by Dabrowski (1972) there are clear positive benefits associated with various forms of "feeling bad" or anxieties which serve as goads for, or concomitants of, development. In this viewpoint, it is the failure of a cognitive schema, accompanied by or signaled by anxieties, which is seen to drive the development of new constructs and psychological growth.

Careful reading of most theorists reveals that they attend to and discuss both functions of anxiety (Wilkins, Hjelle, & Thompson, 1977), however, much of psychology (particularly) clinical psychology) has focused attention upon the debilitating aspects of anxiety.

Two studies in the last few years have attempted to empirically clarify the role of anxiety in personality development. de Grace (1972) reported that small groups of high and low self-actualized subjects were ot significantly different in anxiety level. de Grace used the Shostrum (1974) Personal Orientation Inventory -- POI (I + Tc) scale to measure self-actualization and the IPAT (Cattell & Sheier, 1963) Anxiety Scale Questionnaire (IPAT) as a measure of anxiety. No correlations were presented and the mean differences, while not statistically significant, were such that the high S-A people were less anxious.

Wilkins, et al. (1977) presented data showing significant negative correlations between two anxiety measures; the Taylor (1953) Manifest Anxiety Scale (TMAS) and the IPAT and a global self-actualization measure taken from the POI (I + Tc subscales). Significant mean differences in manifest anxiety level between high and low scorers on the POI were also reported. High POI people had lower mean TMAS scores. They felt this to be a sensible result, that highly self-actualized people should have less neurotic anxieties. Wilkins et al. (1977) concluded that their results supported the more traditional view of the functioning of anxiety and that the notions of Dabrowski were not supported by the empirical facts.

This section of the paper presents conceptual and actual replicates of the Wilkins procedure along with what we consider to be more extensive, and germane analayses of this type of data.

There will be three sets of data described here which were obtained at different times and places. They will be referred to as the (1) Dodez or HAYS1 data, (2) the HAYS2 data, and (3) the East Texas (ETEX) data.

The first data set (HAYS1) was collected as part of a thesis by Orin Dodez in May of 1979. One hundred and twelve students enrolled in General Psychology classes completed the POI, the TMAS, and the IPAT during scheduled class periods. This project was intended to be a replication and extension of the Wilkins et al. (1977) study. Results were partially published (Dodez, Zelhart, & Markley, 1982).

In the East Texas Study, in the Spring of 1984, as part of Beene's study of innovativeness, a group of 179 students from General Psychology and from Educational Psychology classes completed the POI, the TMAS, and the IPAT in an effort to replicate exactly the results reported by Dodez, et al. in the HAYS1 study.

For the HAYS2 study, 93 General Psychology students completed the POI and several alternate measures of anxiety. These included the Howarth (1973) Personality Questionnaire (HPQ), (a ten factor general personality inventory developed and normed in Canada), the Speilberger State-Trait Anxiety Scales, and the Self-Awareness Questionnaire (Fenigstein, Scheier & Buss, 1975). The goal was to conceptually replicate and extend the findings concerning the relations between anxiety measures and self-actualization measures.

The results of correlational analyses of all data sets reconfirmed the global negative relation between anxiety scales and a total POI (I + Tc) measure. The anxiety scales used in these comparisons include the TMAS, the IPAT (raw score), the Spielberger Trait Anxiety (Speilberger, Gorsuch & Lushene, 1970) score, and three anxiety related factors (subscales) from the HPQ; the Anxiety-Emotionality score (AE), the Hypochondriacal-Medical (HM) score, and an Inferiority (IF) score. Howarth (1973) reports that the AE is a general trait anxiety factor of Personality and that the HM and IF factors represent more specific and distinct (oblique factors) expressions of anxiety.

Table 1
Correlations Between Anxiety Measures and POI Scores **

	Anxiety Scales:							
	TMAS	IPAT	ATR	AE	HM	IF	SPU	SANX
Data set:								
HAYS1 (n=112)	-.44*	-.35*						
ETEX (n=179)	-.48*	-.38*						
HAYS2 (n=93)			-.41*	-.36*	-.40*	-.44*	-.30*	-.19

* $p < .05$
** POI = Personal Orientation Inventory (sum of I + Tc scales),
ATR = Speilberger Trait Anxiety Scale
Three anxiety related subscales of the Howarth Personality Questionnaire -- AE: Anxiety, HM: Hypochondriacal-Medical IF: Inferiority Feelings.
SPU = Public Self Awareness and
SANX = Social Anxiety subscales of the Self-Awareness Inventory.

As indicated in Table 1, all three data sets replicated the basic form of the Wilkins et al. (1977) results. There are significant negative correlations between the POI score and all of the various anxiety measures in all of the studies. Additional analyses were then carried out which suggested that these results were not tests of Dabrowski's theory.

Essentially, the argument is that item selection decisions made in construction of the POI guaranteed the negative correlation with the anxiety scales. Dodez et al. (1982) correlated responses to each of the 150 POI items with the TMAS and IPAT scores and reported in their paper that 33 items appeared to related to anxiety on both scales. Ninety-four items were claimed to be anxiety neutral and 23 items were mixed. All but four of the high anxiety items of these anxiety related POI

items were keyed against self-actualization by the developers of the POI.

Dodez then removed the 33 items and rescored the POI using just the 94 neutral items to produce a new global self-actualization score (NAPOI). In the HAYS1 data, this new measure was unrelated (the new rs were nonsignificant) to the anxiety tests (TMAS and IPAT) scores. The same procedure was followed with the ETEX and the HAYS2 data sets.As indicated in Table 2, except for the ETEX data, the rs between self-actualization (NAPOI) and various anxiety measures, while generally negative, are nonsignificant.

Table 2
Correlations Between Anxiety Measures and Self-Actualization as Measured by the NAPOI

	Anxiety Scales: TMAS	IPAT	ATR	AE	HM	IF	SPU	SANX
Data Set:								
HAYS1 (94 Items)	-.05	.05						
ETEX (90 Items)	-.38*	-.32*						
HAYS2 (90 Items)			-.22	-.16	-.22	-.22	-.28*	-.07
(94 Items)			-.16	-.13	-.18	-.15	-.24	-.08

* $p < .05$

In the first two studies, the anxiety scales (TMAS and IPAT) correlated negatively with the original POI total score (and with most of the POI subscale scores). In the HAYS2 study the three anxiety related subscales of the HPQ (AE, HM, and IF) correlated negatively with the original POI total score and most of the

subscale POI scores. Removing the POI anxiety items which were identified by the Dodez et al. study produced nonsignificant or decreased correlations. (See Table 2.) For the NAPOI the correlations with anxiety remain negative. However, in the HAYS2 study several (10) NAPOI items turned out to correlate with the Howarth and Spielberger anxiety scales -- thus maintaining the tendency toward an invervse relationship.

Relations between anxiety scores and choice of reponse to each of the 150 POI items were examined through mean difference tests for the ETEX and the HAYS2 data sets. For example, the mean TMAS score for those people who chose stem A for an item was compared to the mean TMAS score for those who chose stem B. The question was: Did the same items which showed a strong anxiety relationship in the HAYS1 study also show a significant relationship in the present studies which involved different people, different occasions, and different measures of anxiety? The answer is . . . . yes . . . no . . . and maybe!

Item Reanalysis. As a first step, the items analyses were rerun for the HAYS1 data set. There were some errors in the original analysis. In the initial analyses, Dodez et al. (1982) classified items as either (1) anxiety loaded (ANX) when the item had significant differences on anxiety scores on both measures of anxiety or (2) mixed items (MIXED) when the items had signficant differences on one anxiety measure but not the other. In the original analyses, six items that should have been labelled as ANX had been labeled as MIXED. Three items included in the ANX scale should have been MIXED in that they correlated with the

TMAS but not the IPAT. Eight items which should have been labelled MIXED (due to a significant relationship with the IPAT but not the TMAS) had been placed in the NAPOI category. Four items that should have been labelled as NAPOI had been placed in the MIXED category. The net result of this was that the proper Anxiety subscale of the POI (called here now ANX2) should have 36 (not 33) items. The corrected NAPOI scale has 90 items (not 94).

Item analyses of the ETEX data replicated exactly the results of the re-analyses of the HAYS1 data set.

Only correlations with the new (ANX and NAPOI) scales are reported for the ETEX data in Tables 2 & 3. For the HAYS2 data calculations were carried out and are reported for both old and new measures. Correlations between the old and new scales themselves were on the order of +.98.

Table 3
Correlations Between the ANXiety Subscale of the POI, the NAPOI and Other Anxiety Measures

			Anxiety Scales:							
	POI	NAPOI	TMAS	IPAT	ATR	AE	HM	IF	SPU	SANX
Data Set:										
HAYS1	-.63*	+.15	+.74*	+.73*						
ETEX	-.73*	-.54*	+.64*	+.55*						
HAYS2										
90 Item	-.65*	-.36*			+.67*	+.65*	+.59*	+.67*	+.26*	+.32*
94 Item	-.68*	-.32*			+.66*	+.64*	+.59*	+.67*	+.28*	+.31*

* $p < .05$

BEST COPY

For items analyses of the HAYS2 data, the Speilberger ASTAT and ATRAIT scales and the Howarth AE, HM, IF and TS scales were tested. An item that produced significant mean differences on four or more of these six criterion scales was considered an anxiety item. Two or three "hits" was considered a "mixed" result. One of no "hits" was considered a nonanxious item. For the HAYS2 data there were 37 HI ANX items, 25 mixed, and 88 NON-ANX items.

Twenty-one of the 36 Dodez high anxious items reappeared in the HI-ANX sets of the FSHU data. Six of the Dodez Anxious items were judged to be MIXED for the FSHU group. Nine items which were significant indicators of Anxiety when the TMAS and the IPAT served as criteria did not do so with the Spielberger and Howarth anxiety scales. Ten of the 90 (corrected) Dodez NAPOI items were HI-ANX in the HAYS2 group. Fifteen Dodez NAPOI items were judged to be mixed by the Spielberger -- Howarth criteria. Sixty-five items were not related to anxiety scales in any of the studies.

Anxiety Subscale. The POI items which were identified as being anxiety related can be combined and scored as a separate anxiety sub-scale of the POI. For purposes of constuct validity, Table 3 shows the correlations between this new ANX scale and the POI, NAPOI, and various standard trait anxiety scales.

High and Low Groups. The high and low scoring (15%) POI subjects were skimmed off and analyzed separately for each data set. The question asked was whether there was some unique sort of relationship between anxiety and self-actualization characteristic of the very high or very low scorer. Correlations

Table 4
Comparison of Correlations Between Anxiety and Self-Actualization Measures for Three Different High Scoring (Upper 15 Percent) POI Groups

	NAPOI	ANX	TMAS	IPAT	ATR	AE	HM	IF
POI								
HAYS1	.65*	.29	.34	.09				
ETEX	.68*	-.25	-.32	-.24				
HAYS2	.84*	-.24			.16	.19	.08	-.12
NAPOI								
HAYS1		.83*	.61*	.63*				
ETEX		.16	-.09	-.04				
HAYS2		.13			.37	.24	.14	-.10
ANX								
HAYS1			.67*	.82*				
ETEX			.53*	.62*				
HAYS2					.46*	.39	.23	.45*

* $p < .05$

Note: HAYS1: N=18, POI GT 108
ETEX: N=28, POI GE 110
HAYS2: N=20, POI GE 105

between the various anxiety scales and the POI and NAPOI scores are presented in Tables 4 and 5. The high POI subjects, for the 2 HAYS groups, tend to show a positive but usually nonsignificant relation between both their POI and NAPOI scores and the anxiety scales. The HAYS1 data set is especially suggestive. There were hopes that these rs would be larger and replicate! The low POI subjects have nonsignificant negative or zero relations between anxiety and POI. The NAPOI correlations with anxiety were positive but nonsignificant in this low group.

Table 5
Comparison of Correlations Between Anxiety and Self-Actualization Measure for Three Different Low Scoring (Lower 15 Percent) POI Groups

	NAPOI	ANX	TMAS	IPAT	ATR	AE	HM	IF
POI								
HAYS1	.56	-.64*	-.38	-.09				
ETEX	.69*	-.28	-.15	-.02				
HAYS2	.68*	-.60			-.40*	-.26	-.25	-.32
NAPOI								
HAYS1		.09	.13	.14				
ETEX		-.14	.02	.08				
HAYS2		.08			.04	.36	.29	.26
ANX								
HAYS1			.64*	.38*				
ETEX			.74*	.74*				
HAYS2					.62*	.69*	.64*	.79*

* $p < .05$

Note: HAYS1: N = 17, POI LT 84
ETEX: N = 28, POI LE 80
HAYS2: N = 20, POI LE 88

Table 6
Comparison of Correlations Between Anxiety and Self-Actualization Measures for Three Different High Scoring (Upper 15 Percent) NAPOI Groups

Variables: MEAN	NAPOI	ANX	TMAS	IPAT	ATR	AE	HM	IF
POI								
ETEX 111.0	.57*	-.73*	-.33*	-.19				
HAYS2 110.3	.77*	-.69*			-.36	-.18	-.22	-.56*
NAPOI								
ETEX 70.0		-.45*	-.19	-.30*				
HAYS2 67.1		-.34			-.22	-.14	-.16	-.42*
ANX								
ETEX 9.6			.43*	.39*				
HAYS2 11.1					.41*	.34	.09	.52*

* $p < .05$
Note: ETEX: N = 31, NAPOI GE 66
HAYS2: N = 20, NAPOI GT 62

Similar calculations are shown for the high and low scoring NAPOI groups in Tables 6 and 7. In the High NAPOI group the POI-Anxiety relationships are negative but nonsignificant. Except for the ETSU data the NAPOI correlations with anxiety are positive but not significant.

Table 7
Comparison of Correlations Between Anxiety and Self-Actualization Measures for Three Different Low Scoring (Lower 15 Percent) NAPOI Groups

Variables:	MEAN	NAPOI	ANX	TMAS	IPAT	ATR	AE	HM	IF
POI									
ETEX	71.0	.74*	-.60*	-.40*	-.39*				
HAYS2	81.9	.74*	-.74*			-.60*	-.45*	-.46*	-.54*
NAPOI									
ETEX	43.2		-.29	-.13	-.14				
HAYS2	47.3		-.24			-.27	.04	.01	-.02
ANX									
ETEX	18.3			.72*	.73*				
HAYS2	15.3					.68*	.75*	.70*	.78*

* $p < .05$
Note: ETEX: N = 29, NAPOI LE 48
HAYS2: N = 17, NAPOI LE 52

Discussion

What does it add up to? An excercise in sampling variability of the Pearson correlation coefficient? Most everything is nonsignificant. However there is consistency of sign and pattern across three independent sets of data.

The general pattern of findings reported in the previous studies was replicated. People who admit to feelings of general trait anxiety will of necessity score low on the POI measures of

self-actualization since anxiety related stems of the POI items are keyed against self-actualization. (48 out of the 58 items which were most strongly related to various anxiety scales were keyed negatively in scoring of the POI scales.) Removing the anxiety component from the POI produces relations between NAPOI and anxiety which are reduced to nonsignificance (although negative direction is maintained in both of the later studies).

There is a solid core of anxiety items in the POI which maintain their identity despite changes in groups, times, and criterion measures of anxiety. A clinician or counselor who uses the POI for assessment of "positive mental health" or to measure change in a client can obtain and use an anxiety score from the POI information. Table 8 contains a list of the ANX items.

Table 8
Items on the POI Included in the
New ANX Subscale

Especially High Items:	4, 26, 29, 36, 42, 48, 50, 73, 82, 88, 94, 98, 105, 120, 125, 127, 131, 132, 134, 136
Other Items Include:	18, 25, 27, 58, 64, 68, 70, 97, 118, 121, 126, 135, 142, 147, 149

There is a rather large degree of variability in the findings with regard to the item analyses. This may be due to the varied nature of the anxiety scales used as criteria, or due to obscure group differences in the studies, or representative of sheer statistical randomness.

There also is some variability in results of the correlational analyses between and within the three data sets. The very

promising results of the original Dodez analysis (especially the High S-A data in Tables 4 and 6) were not replicated in the later two sets of data).

It must be noted briefly that all of the measures used in these group studies are somewhat crude and a lot of error variance is accumulated in these results. A strong case could easily be made for better measurement procedures and intensive idiographic study of prototypical individuals.

The data do NOT refute Dabrowski's idea of anxiety as a goad to self-actualization -- nor do the data confirm it! There are suggestions, particularly from the HAYSI data set -- but on the whole these results and the results of the data presented in the section that follows are mixed. The best guess is, at this point, that there are no simple answers. That is, anxiety has an important developmental role, but it functions differently at different levels of development, and differently for different types of creative people.

Paper #3

SELF-ACTUALIZATION OF THE ADAPTOR/INNOVATOR

J. Morris Beene, Jr.

It has been noted that people characteristically produce qualitatively different solutions to similar problem situations. In an attempt to explain this phenomenon, researchers have explored areas of creativity, intelligence and personality characteristics. One recent attempt was made by Michael Kirton, (The Hatfield

Polytechnic, St. Albans, England). Kirton is a management consultant much concerned with how organizations and individuals within organizations successfully solve problems.

KIRTON ADAPTION-INNOVATION INVENTORY

Kirton (1976) reported a measure called the Kirton Adaption-Innovation Inventory (KAI) which identifies two personality based approaches to problem solving. The theory of the scale holds that these are types of creativity and that this particular personality variable is measured on a continuum. The personality type labeled adaptor is found on one end of the continuum and the innovator is located at the other end. Individuals who are neither adaptors nor innovators are distributed between the poles. The scale itself contains 32 scored items with one blind item. Each item is scored on a Likert-type scale of 1-5. The subject is asked to make a judgement of how hard or how easy it is to consistently present themselves in certain ways. For example, one item is: "How easy or difficult do you find it to present yourself, consistently, over a long period, as: A person who is patient." At the end of this statement is a series of responses: Very Hard, Hard, Easy, and Very Easy, with a space between Hard and Easy. The adaptor is identified by lower scale scores (from 32-86) with lower scores indicating higher levels of adaption. The innovator is identified by higher scores (from 104-160) with the higher score indicating higher levels of innovation.

BEST COPY

EXPLANATION OF THE ADAPTOR/INNOVATOR

The adaptor is, by Kirton's definition, a precise, reliable personality type who attempts to solve problems in ways which have been tested in previous, similar situations. The adaptor works well in structured situations and does not often change rules, nor does he/she often challenge established procedures. The innovator, by definition, is an individual often seen by others as undisciplined, unsound, impractical and often a person who enjoys "shocking" their peers with their creative solutions to problems. The innovator approaches problems from unsuspected angles, and is often seen as being highly abrasive and creates dissonance in group situations. In trying to find solutions to problems, the innovator is known to "cut across current paradigms" (Kirton, 1982). Figure 2 has a full description of the adaptor and innovator.

In organizational structures, Kirton sees the adaptor as one who is extremely effective in managing the current system and strives to make the current system function at the highest possible level of efficiency. The innovator, on the other hand, can work for only a short time in a structured environment, and soon becomes uncomfortable in that role. The innovator is continually looking for problems to solve. If problems do exist in the organization, the innovator will find them, and create possible solutions to those problems. If, however, there are no apparent problems in the organization, the innovator will either create what he/she has identified as a problem, or leave to find an institution that has inherent problems within the system.

Figure 2

Characteristics of the Adaptor and Innovator

Adaptor	Innovator
Seen as precise, reliable efficient, methodical well disciplined, and conforming.	Seen as undisciplined, thinks tangentially, approaches tasks from unsuspected angles.
Concerned with resolving problems rather than finding them.	Could be said to discover problems and discover avenues of solution.
Seeks solutions to problems in tried and understood ways.	Queries problems' concomitant assumptions; manipulates problems.
Reduces problems by improvement and greater efficiency, with maximum of continuity and stability.	Is catalyst to unsettled groups, irreverant of their consensual views; seen as abrasive, creates dissonance.
Liable to make goals of means.	In pursuit of goals treats accepted means with little regard.
Seems impervious to boredom, seems able to maintain high accuracy in long spells of detailed work.	Capable of detailed routine (system maintenance) work for only short bursts. Quick to delegate routine tasks.
Is an authority within given structures.	Tends to take control in unstructured situations.
Challenges rules rarely, cautiously, when assured of stong support.	Often challenges rules, has little respect for past custom.
Tends to high-self doubt; to criticise by closer outward conformity. Vulnerable to social pressure and authority; compliant.	Appears to have low self-doubt when generating ideas, not needing any consensus to maintain certitude in face of opposition.
Is essential to the functioning of the institution all the time, but occasionally needs to be "dug out" of his systems.	In the institution is ideal in unscheduled crises, or better still to help to avoid them, if he can be controlled.
When collaborating with innovators; supplies stability, order, and continuity to the partnership.	When collaborating with adaptors; supplies the task orientations and the break with the past and accepted theory.
Sensitive to people, maintains group cohesion and cooperation.	Insensitive to people, often threatens group cohesion and cooperation.
Provides a safe base for the innovator's riskier operations.	Provides the dynamics to bring about periodic radical change, without which institutions tend to ossify.

In summary, the adaptor is best suited for the organization which is currently functioning well and needs no major changes. The innovator functions best in a situation where problems are evident, in which the "old solutions" no longer work, and a fresh approach is needed.

SELF-ACTUALIZATION OF THE ADAPTOR/INNOVATOR

Kirton & Hammond (1980) attempted to identify measurable differences in the level of self-actualization in the adaptor and innovator. Their study indicated no significant difference between the two personality types, other than that the "average" score was "somewhat higher" in self-actualization than either extreme score. We have identified several problems concerning this particular study. First, the measure of self-actualization used by Kirton & Hammond was in reality, a measure of self-concept developed by Lipsitt (1958) for children. Kirton & Hammond apparently claimed that the measure also identified levels of self-actualization in adults. The inconclusive results of the study may indicate otherwise. The second problem centers around potential interactions with anxiety, outlined earlier, which may affect the existing measures of self-actualization and creativity.

In the present study, 179 college students enrolled in classes at East Texas State University were tested. The subjects were enrolled in Introduction to Psychology classes and Educational Psychology classes. There were 65 males and 114 females whose ages were separated into four age ranges: (1) 20

and under, (2) 21-25, (3) 26-30, and (4) over 30. Four tests were administered to each subject: The Personal Orientation Inventory, the Kirton Adaption/Innovation Inventory, the Taylor Manifest Anxiety Scale and the IPAT Anxiety Scale Questionnaire. The tests were administered in various orderings to prevent possible sequencing effects.

The top 15 percent of the subjects were used to identify the high self-actualized individuals (POI-SA). The cut-off for the POI-SA group was 111. There were 29 individuals of the original 179 identified in the high group. A breakdown of the high self-actualized group using the NAPOI (NAPOI-SA) was also performed. The top 15 percent of the scores on the NAPOI were used, with the cut-off for NAPOI-SA was 66. There were 38 individuals identified as begin highly self-actualized by the NAPOI. In comparison, there were 23 of of the 29 POI-SA group which were also identified in the NAPOI-SA group. Fifteen additional individuals were added using the NAPOI.

In order to assess the levels of self-actualization of adaptors and innovators the subjects were classified into three sub-groups on the basis of their KAI scores. Individuals with scores equal to or greater than 104 were classified as innovators. Subjects with scores equal to or below 86 were classified as adaptors. Those scoring between 86 and 104 were labeled "average." Two analyses of variance were computed to compare both POI and NAPOI scores across the three KAI sub-groups. Results of the analysis of variance using the POI scores indicated that the innovator scored significantly higher

than the adaptor and the "average" score on the KAI ($F = 6.78$, $p = .002$). When the NAPOI was used to measure self-actualization, the innovator scored significantly higher than the "average" individual and higher than the adaptor ($F = 7.842$, $p = .0005$). For the NAPOI comparison there were 3 more innovators and 8 more adaptors added to the list of those classified as self-actualized (NAPOI-SA). Also, there was a modest but significant positive correlation between the KAI and the NAPOI ($r = .2032$, $p = .003$) which suggested that as the KAI score increased (toward the innovator end of the continuum) the level of self-actualization also increased. The innovator scored significantly lower than the adaptor on two of the measures of anxiety used (TMAS, $F = 3.206$, $p = .0429$; ANXPOI, $F = 6.118$, $p = .0027$). This indicates a tendency for (1) the innovator not to recognize situations as anxiety provoking and (2) the adaptor to be tied into the system to such a high degree that any problem within the system would cause an anxiety response.

Table 9

Descriptive Statistics of Variables for KAI Groups

	ADAPTORS (N = 54)		AVERAGE (N = 83)		INNOVATORS (N = 42)			
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	F	p
KAI	79.33	5.97	94.48	4.25	113.78	8.30		
POI	91.61	14.85	94.78	14.45	102.74	16.21	6.78	.002
NAPOI	56.57	8.88	55.94	8.17	62.24	9.48	7.842	.0005
TMAS	17.81	8.73	14.54	6.83	14.69	8.41	3.206	.0429
IPAT	32.72	12.33	29.60	9.55	20.52	11.99	1.533	.2187
ANXPOI	14.33	5.98	11.86	5.10	10.54	5.56	6.118	.0027

By removing the confounding variables mentioned in the Kirton & Hammond study, the relationship of self-actualization and the adaptor/innovator is clearer. The innovator has a higher level of self-actualization than the adaptor and the average scorer on the KAI. The innovator also has less overall anxiety than the adaptor. With the influence of anxiety removed from the POI, which resulted in the new NAPOI scale, the innovator/adaptor self-actualization relationship supports the original hypothesis of Kirton and Hammond (1980) which was that there would be a significant difference between the self-actualization scores of the adaptor and the innovator.

In describing the relationship of anxiety to personal growth, Dabrowski (1970) explained that anxiety is the driving mechanism for personal growth. He further stated that toward the later part of the 4th level, anxiety was no longer the prime motive for growth. By way of explanation, perhaps the high innovator and high adaptor may both be moving toward self-actualization (in the 4th level), yet the innovator may be in the upper part of Dabrowski's 4th level, thus the anxiety is no longer recognized as an important part of his/her environment. The adaptor, on the other hand, may be functioning at the 4th level, or lower, and anxiety is still a motivating factor in his/her thinking processes and the might be interfering with the individual's growth. This hypothesis is consistent with comparisons of innovator and adaptor mean anxiety scores.

REFERENCES

Cattell, R. B. & Scheier, I. H. (1963). Handbook for the IPAT Anxiety Scale Questionnaire. Champaign, Ill.: Institute for Personality and Ability Testing.

Dabrowski, K. (1970). Mental growth through positive disintegration. London: Gryf Publications, Ltd.

Dabrowski, K. (1972). Psychoneurosis is not an illness. London: Gryf Publications, Ltd.

de Grace, G. (1974). The compatibility of anxiety and actualization. Journal of Clinical Psychology, 30, 566-568.

Dodez, O., Zelhart, P. F., & Markley, R. P. (1982). Compatibility of self-actualization and anxiety. Journal of Clinical Psychology, 38, 696-702.

Fenigstein, A., Scheier, M. F., and Buss, A. H. (1975). Public and Private Self-Consciousness: Assessment and Theory. Journal of Consulting and Clinical Psychology, 43, 522-527.

Howarth, E. E. (1973). Howarth Personality Questionnaire, Edmonton: Department of Psychology, University of Alberta.

Kirton, M. (1976). Adaptors and Innovators: A descriptions and measure. Journal of Applied Psychology, 61, 622-629.

Kirton, M. (1982). Kirton adaption-innovation inventory (KAI) manual. (Research edition). Occupational Research Centre, Hertforshire, England.

Kirton, M. & Hammond, S. (1980). Levels of self-actualization of adaptors and innovators. Psychological Reports, 46, 1321-1322.

Kohlberg, L. (1964). Development of moral character and moral ideology. In M. L. Hoffman and L. W. Hoffman (Eds.), Review of child development research, (Vol. 1), New York: Russell Sage Foundation.

Lipsitt, L. P. (1958). A self-concept scale for children and its relationship to the children's form of the Manifest Anxiety Scale. Child Development, 29, 463-469.

Maslow, A. H. (1968). Toward a psychology of being. Princeton, N. J.: Van Nostrand Company, Inc.

Shostrum, E. L. (1974). Personal orientation inventory manual. San Diego: Education and Industrial Testing Service.

Speilberger, C. D., Gorsuch, R. L. & Lushene, R. E. (1970). STAI manual for the stait-trait anxiety inventory. Palo Alto, Cal.: Consulting Psychologists Press, Inc.

Taylor, J. A. (1953). A personality scale of manifest anxiety. The Journal of Abnormal and Social Psychology, 45, 285-290.

Wilkins, W. E., Hjelle, L. A., & Thompson, M. (1977). Anxiety and actualization: A reconceptualization. Journal of Clinical Psychology, 33, 1001-1005.

Yerkes, R. M. & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit formation. The Journal of Comparative and Neurological Psychology, 18, 459-482.

Zelhart, P. F. (1975). A personal communication with K. Dabrowski. Edmonton: University of Alberta.

Table 10

Descriptive Statistics of Variables for KAI Groups

	ADAPTORS (N = 54)		AVERAGE (N = 83)		INNOVATORS (N = 42)			
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	F	p
KAI	79.33	5.97	94.48	4.25	113.78	8.30		
POI	91.61	14.85	94.78	14.45	102.74	16.21	6.78	.002
NAPOI	56.57	8.88	55.94	8.17	62.24	9.48	7.842	.0005
TMAS	17.81	8.73	14.54	6.83	14.69	8.41	3.206	.0429
IPAT	32.72	12.33	29.60	9.55	20.52	11.99	1.533	.2187
ANXPOI	14.33	5.98	11.86	5.10	10.54	5.56	6.118	.0027